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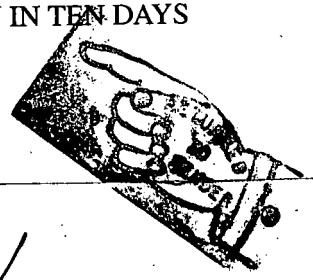

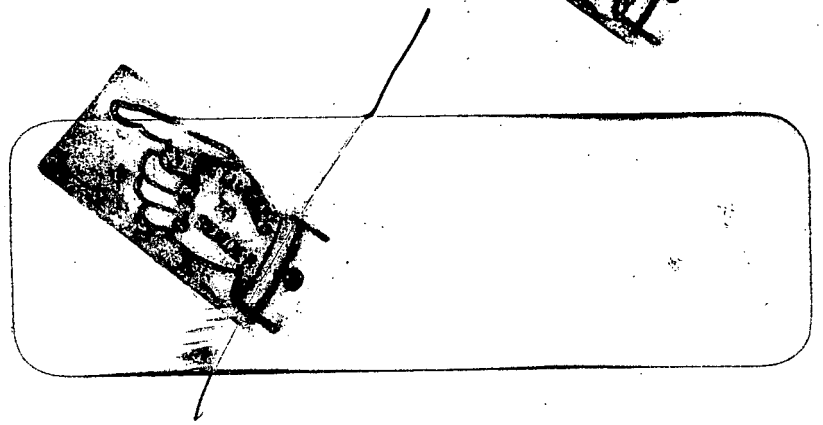

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,363	09/27/2001	Richard B. Wank	WRN0002	6432

7590 09/21/2005

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EXAMINER	
ROBERTS, BRIAN S	

ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SEP 22 2005

Office Action Summary	Application No.	Applicant(s)	
	09/965,363	WANK ET AL.	
	Examiner	Art Unit	
	Brian Roberts	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 September 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-66* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-66* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 September 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-66 have been examined.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2 and 33-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- In reference to claim 2

It is unclear whether the term "Dykstra routine" is a limitation of the claim. The Examiner assumes that the term "Dyskra routine" is not a limitation of the claim for the purpose of examination.

- In reference to claim 33

The term "substantially" is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

- In reference to claims 34-35

Claims 34-35 are rejected because they depend on claim 33.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-18, 33-34 and 36-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manchester (US 5793745) in view of Lu (US 5412652).

- In reference to claims 1, 36

In Figure 8 (column 4 lines 14-57), Manchester teaches a system and method in an UPSR, BLSR or linear topology (column 1 lines 50-55) that includes:

- A network element receiving a command (receiving a link command) (step 802)
- Determining whether the command is a trigger, acknowledgement, coordination message and whether it is associated with a protection bundle (determining type of link command) (step 806)
- When the network element receives a trigger (establish command), indicating that another network element has detected a failure and that the PB needs to be switched from the working facility to the protection facility the network element determines whether it terminates a BPF (determine if it is a termination node) (Figure 5D)
- If the network element does not terminate the BPF specified by the trigger, the network element forwards the trigger to the end points via the through BPFs (optimal path). (step 818)

Manchester does not explicitly teach:

- Processing the link command based on the type of path to the adjacent one of the plurality of network elements
- The network element containing a processing module and memory.

In Figure 11, Lu teaches a network element containing a CPU and memory in a UPSR/BLSR topography. The network elements utilize a ring table to store the ring type. (column 7 lines 53-54)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Manchester to include the network elements, containing a CPU and memory and the network elements processing the commands based upon the ring type of the adjacent network element stored in the ring table of the network element because it allows the network elements to be configured in linear, UPSR, and BLSR topologies within a SONET environment and allows a termination node to switch from the working facility to the protection facility used by the specific ring type.

- In reference to claims 2, 37

The combination of Manchester and Lu teach a system and method that covers substantially all limitations of the parent claim. In Figure 8, Manchester further teaches a method of forwarding the trigger to the end points via the through BPF (optimal path). (step 818)

- In reference to claims 3, 38

The combination of Manchester and Lu teach a system and method that covers substantially all limitations of the parent claim. In Figure 8, Manchester further teaches that if the network element terminates the BPF, the PB is switched from BPFs along the

working facilities to preassigned CPRs on the protection facilities. (allocating resources of the network element for the communication link)

Manchester does not explicitly teach acknowledging the establishment of the communication link.

Manchester teaches the utilization of acknowledgement and coordination signals. (column 8 lines 40-43)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the method of Manchester to include the network element generating an acknowledgement of the establishment of the protection facility communication link to the other network elements that are through network elements for the PB in order to indicate to the adjacent nodes a switch from the working facility to the protection facility.

- In reference to claims 4, 39

The combination of Manchester and Lu teach a system and method that covers substantially all limitations of the parent claim.

Manchester does not teach determining the link coupling protocol.

In Figure 4a, Lu teaches utilizing a table to determine the ring type or topology (link coupling protocol) of the plurality of network elements.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Manchester to include utilizing a ring table to determine the ring types of the plurality of network elements because it allows

SONET ring management functions including auto provisioning and ring automatic protection switching, as well as configuration or reconfiguration for the particular type of SONET ring.

- In reference to claims 5-8, 40-43

The combination of Manchester and Lu teach a system and method that covers substantially all limitations of the parent claim.

Manchester does not explicitly teach support to add, continue, or drop a connection in a UPSR as in claims 5-8 and 40-43 of the application.

In Figures 4a-4e and 6, Lu teaches a method of support to add, continue or drop connection in a UPSR that includes using a ring table in the network elements and utilizing standard communication protocols and messages to inherently determine messages received by the network elements and generate/transmit network element link commands between network elements to update the ring tables in the network elements. (column 6 lines 3-6) The ring tables are used to create a working and back-up path and assign resources including add/drop connections to the plurality of network elements in the working and back-up paths. (column 8 lines 16-22)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Manchester to include support to add, continue or drop connection in a UPSR as taught by Lu because it allows configuration or reconfiguration of the UPSR topology.

- In reference to claims 9, 44

The combination of Manchester and Lu teach a system and method that covers substantially all limitations of the parent claim. Manchester further teaches a linear topology.

Manchester does not teach assigning resources to the adjacent plurality of network elements, generating a network element link command to establish the communication link, and providing the network element link command to the adjacent one of the plurality of network elements in a linear system.

In Figures 4a-4e and 6, Lu teaches utilizing a ring table in the network elements and utilizing standard communication protocols and messages to inherently determine messages received by the network elements and generate/transmit network element link commands between the network elements to update the ring tables in the network elements. (column 6 lines 3-6) The ring tables are used to assign resources including add/drop connections to the plurality of network elements. (column 8 lines 16-22)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the linear topology and method of Manchester to include assigning resources to adjacent network elements includes using a ring table in the networks and standard communication protocols and messages to update the tables in the network elements as taught by Lu because it allows the network elements in the linear SONET topology to be reconfigured.

- In reference to claims 10-12, 45-47

The combination of Manchester and Lu teach a system and method that covers substantially all limitations of the parent claim.

Manchester does not explicitly teach support to add, continue, or drop a connection in a BLSR as in claims 10-12 and 45-47 of the application.

In Figures 4a-4e and 6, Lu teaches a method of support to add, continue or drop connection in a BLSR that includes using a ring table in the network elements and utilizing standard communication protocols and messages to inherently determine messages received by the network elements and generate/transmit network element link commands between network elements to update the ring tables in the network elements. (column 6 lines 3-6) The ring tables are used to create a working and back-up path and assign resources including add/drop connections to the plurality of network elements in the working and back-up paths. (column 8 lines 41-65)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Manchester to include support to add, continue or drop connection in a BLSR as taught by Lu because it allows configuration or reconfiguration of the BLSR topology.

- In reference to claim 13

The combination of Manchester and Lu teach a system and method that covers substantially all limitations of the parent claim.

Manchester does not explicitly teach receiving a local make link command and allocating resources for the communication link.

In Figures 4a-4e and 6, Lu teaches utilizing ring tables in the network elements and standard communication protocols and messages to inherently determine the type of messages received by the network elements and generate/transmit network element link commands to adjacent network elements to update the ring tables in the network elements. (column 6 lines 3-6) The ring tables are used to create a working and back-up path and assign resources including add/drop connections to the plurality of network elements in the working and back-up paths. (column 8 lines 41-65)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Manchester to include receiving an update message (local make link command) at a node containing a ring table and allocating resources for a connection as taught by Lu because it allows reconfiguration of the network elements and the SONET rings.

- In reference to claims 14-15, 48-49

The combination of Manchester and Lu teach a system and method that covers substantially all limitations of the parent claim. Manchester further teaches a method of determining whether the network element is a termination node and utilizing acknowledgement messages to acknowledge link commands. (column 8 lines 40-43)

Manchester does not explicitly teach receiving a delete link command in a linear topology as in claims 14-15 and 48-49 of the application.

In Figures 4a-4e and 6, Lu teaches a method of deleting allocation of resources in a BLSR/UPSR topology that includes using a ring table in the network elements and

utilizing standard communication protocols and messages to inherently determine messages received by the network elements and generate/transmit network element link commands between network elements to update the ring tables in the network elements. (column 6 lines 3-6) The ring tables are used to create and modify working and back-up channels/paths and can delete resources the plurality of network elements allocated to the working or back-up channels/paths including deleting the node within the working or back-up channels/paths. (column 8 lines 6-15, 41-65)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system with linear topology and method of determining whether the network element is a termination node and utilizing acknowledgement messages to acknowledge link commands Manchester to include deleting the allocation of network elements in a BLSR/UPSR topology as taught by Lu so that the resources of the network elements in the linear topology can be reconfigured and the network elements can acknowledge deletion of the allocated resources.

- In reference to claims 16-17 and 50-51

The combination of Manchester and Lu teach a system and method that covers substantially all limitations of the parent claim. Manchester further teaches utilizing acknowledgement messages to acknowledge link commands. (column 8 lines 40-43)

Manchester does not explicitly teach support to add, continue, or drop a node in a BLSR/UPSR topology as in claims 16-17 and 50-51of the application.

In Figures 4a-4e and 6, Lu teaches a method of support to add, continue or drop a node in a BLSR/UPSR topology that includes using a ring table in the network elements and utilizing standard communication protocols and messages to inherently determine messages received by the network elements and generate/transmit network element link commands between network elements to update the ring tables in the network elements. (column 6 lines 3-6) The ring tables are used to create and modify working and back-up channels/paths and can delete resources the plurality of network elements allocated to the working or back-up channels/paths including deleting the node within the working or back-up channels/paths. (column 8 lines 6-15, 41-65)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of utilizing acknowledgement messages to acknowledge link commands of Manchester to include support add node, continue node, or drop node in a BLSR/ UPSR topology as taught by Lu so that network elements in the SONET environment can be reconfigured into SONET rings and the network elements can acknowledge deletion of resources allocated to the communication channels/paths.

- In reference to claim 18, 52

The combination of Manchester and Lu teach a system and method that covers substantially all limitations of the parent claim. Manchester further teaches a method of determining whether the network element is a termination node and utilizing acknowledgement messages to acknowledge link commands. (column 8 lines 40-43)

Manchester does not explicitly teach receiving a modify link command as in claim 18 of the application.

In Figures 4a-4e and 6, Lu teaches a method of modifying working or back-up channels/paths in a BLSR/UPSR topology that includes using a ring table in the network elements and utilizing standard communication protocols and messages to inherently determine messages received by the network elements and generate/transmit network element link commands between network elements to update the ring tables in the network elements. (column 6 lines 3-6) The ring tables are used to create and modify working and back-up channels/paths from a first network to a second network element including modifying the sequence of nodes to create an optimal working and back-up channels/paths. (column 8 lines 6-15, 41-65)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of determining whether the network element is a termination node of Manchester to include using ring tables at the network elements to create and modify working and back-up channels/paths from a first network to a second network element including modifying the sequence of nodes to create a optimal working and back-up channels/paths because it allows the reconfiguration of the SONET rings.

- In reference to claim 33

In Figure 6, Manchester teaches a network element inherently containing a processing module and memory capable of communicating data over a SONET physical layer. (column 5 lines 27-28)

Manchester does not explicitly teach a control layer to substantially automate establishment of communication links within a communication system.

Lu teaches a control layer supporting auto provisioning. (column 6 lines 3-27)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Manchester to include a control layer to automate the establishment of connections because it allows the configuration and reconfiguration of network elements and SONET rings.

- In reference to claim 34

In Figure 8, Manchester teaches a system and method in a ring or linear topology that includes: (column 4 lines 14-57)

- A network element receiving a command (receiving a link command) (step 802)
- Determining whether the command is a trigger, acknowledgement, coordination message and whether it is associated with a protection bundle (determining type of link command) (step 806)
- When the network element receives a trigger (establish command), indicating that another network element has detected a failure and that the PB needs to be switched from the working facility to the protection facility the network

element determines whether it terminates a BPF (determine if it is a termination node) (Figure 5D)

- If the network element does not terminate the BPF specified by the trigger, the network element forwards the trigger to the end points via the through BPFs (optimal path). (step 818)

Manchester does not explicitly teach:

- Processing the link command based on the type of path to the adjacent one of the plurality of network elements
- The network element containing a processing module and memory.

In Figure 11, Lu teaches a network element containing a CPU and memory in a UPSR/BLSR topography. The network elements utilize a ring table to store the ring type. (column 7 lines 53-54)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Manchester to include the network elements, containing a CPU and memory and the network elements processing the commands based upon the ring type of the adjacent network element stored in the ring table of the network element because it allows the network elements to be configured in linear, UPSR, and BLSR topologies within a SONET environment and allows a termination node to switch from the working facility to the protection facility used by the specific ring type.

6. Claims 19-32, 35 and 53-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manchester (US 5793745) in view of Lu (US 5412652), as applied to the parent claims, and further in view of Naik et al. (US 2003/0202645)

- In reference to claims 19, 32, 53 and 66

In Figure 8, Manchester teaches a system and method in a ring or linear topology that includes: (column 4 lines 14-57)

- A network element receiving a command (receiving a link command) (step 802)
- Determining whether the command is a trigger, acknowledgement, coordination message and whether it is associated with a protection bundle (determining type of link command) (step 806)
- When the network element receives a trigger (establish command), indicating that another network element has detected a failure and that the PB needs to be switched from the working facility to the protection facility the network element determines whether it terminates a BPF (determine if it is a termination node) (Figure 5D)
- If the network element does not terminate the BPF specified by the trigger, the network element forwards the trigger to the end points via the through BPFs (optimal path). (step 818)

Manchester does not explicitly teach:

- Processing the link command based on the type of path to the adjacent one of the plurality of network elements

- Determining the link coupling protocol
- The network element containing a processing module and memory.

In Figure 11, Lu teaches a network element containing a CPU and memory in a UPSR/BLSR topography. The network elements utilize a ring table to store the ring type or topology (link coupling protocol) of the plurality of network elements. (column 7 lines 53-54)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Manchester to include the network elements, containing a CPU and memory and the network elements processing the commands based upon the ring type of the adjacent network element stored in the ring table of the network element because it allows the network elements to be configured in linear, UPSR, and BLSR topologies within a SONET environment and allows a termination node to switch from the working facility to the protection facility used by the specific ring type.

The combination of Manchester and Lu does not teach receiving a network manager link command.

Naik et al. teaches a network element management system which automatically configures itself when an operator enters a component identifier for optimal full-featured management of the identified component. The network element inherently receives the command and determines the type of command. (abstract)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of the combination of Manchester and

Lu to include a network element receiving a command from a management system because it allows a network manager to configure or reconfigure the ring tables in the network elements as well as the SONET rings.

- In reference to claim 20-23 and 54-57

The combination of Manchester and Lu teach a system and method that covers substantially all limitations of the parent claim.

Manchester does not explicitly teach support to add, continue, or drop a connection in a UPSR as in claims 20-23 and 54-57 of the application.

In Figures 4a-4e and 6, Lu teaches a method of support to add, continue or drop connection in a UPSR that includes using a ring table in the network elements and utilizing standard communication protocols and messages to inherently determine messages received by the network elements and generate/transmit network element link commands between network elements to update the ring tables in the network elements. (column 6 lines 3-6) The ring tables are used to create a working and back-up path and assign resources including add/drop connections to the plurality of network elements in the working and back-up paths. (column 8 lines 16-22)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Manchester to include support to add, continue or drop connection in a UPSR as taught by Lu because it allows configuration or reconfiguration of the UPSR topology.

- In reference to claim 24, 58

The combination of Manchester and Lu teach a system and method that covers substantially all limitations of the parent claim. Manchester further teaches a linear topology. (column 1 lines 50-55)

Manchester does not teach assigning resources to the adjacent plurality of network elements, generating a network element link command to establish the communication link, and providing the network element link command to the adjacent one of the plurality of network elements in a linear system.

In Figures 4a-4e and 6, Lu teaches utilizing a ring table in the network elements and utilizing standard communication protocols and messages to inherently determine messages received by the network elements and generate/transmit network element link commands between the network elements to update the ring tables in the network elements. (column 6 lines 3-6) The ring tables are used to assign resources including add/drop connections to the plurality of network elements. (column 8 lines 16-22)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the linear topology and method of Manchester to include assigning resources to adjacent network elements includes using a ring table in the networks and standard communication protocols and messages to update the tables in the network elements as taught by Lu because it allows the network elements in the linear SONET topology to be reconfigured.

- In reference to claims 25-27 and 59-61

The combination of Manchester and Lu teach a system and method that covers substantially all limitations of the parent claim.

Manchester does not explicitly teach support to add, continue, or drop a connection in a BLSR as in claims 25-27 and 59-61 of the application.

In Figures 4a-4e and 6, Lu teaches a method of support to add, continue or drop connection in a BLSR that includes using a ring table in the network elements and utilizing standard communication protocols and messages to inherently determine messages received by the network elements and generate/transmit network element link commands between network elements to update the ring tables in the network elements. (column 6 lines 3-6) The ring tables are used to create a working and back-up path and assign resources including add/drop connections to the plurality of network elements in the working and back-up paths. (column 8 lines 41-65)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Manchester to include support to add, continue or drop connection in a BLSR as taught by Lu because it allows configuration or reconfiguration of the BLSR topology.

- In reference to claims 28 and 62

The combination of Manchester and Lu teach a system and method that covers substantially all limitations of the parent claim. Manchester further teaches a method of determining whether the network element is a termination node and utilizing acknowledgement messages to acknowledge link commands.

Manchester does not explicitly teach receiving a delete link command in a linear topology as in claims 28 and 62 of the application.

In Figures 4a-4e and 6, Lu teaches a method of deleting allocation of resources in a BLSR/UPSR topology that includes using a ring table in the network elements and utilizing standard communication protocols and messages to inherently determine messages received by the network elements and generate/transmit network element link commands between network elements to update the ring tables in the network elements. (column 6 lines 3-6) The ring tables are used to create and modify working and back-up channels/paths and can delete resources the plurality of network elements allocated to the working or back-up channels/paths including deleting the node within the working or back-up channels/paths. (column 8 lines 6-15, 41-65)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system with linear topology and method of determining whether the network element is a termination node and utilizing acknowledgement messages to acknowledge link commands Manchester to include deleting the allocation of network elements in a BLSR/UPSR topology as taught by Lu so that the resources of the network elements in the linear topology can be reconfigured and the network elements can acknowledge deletion of the allocated resources.

- In reference to claims 29-30 and 63-64

The combination of Manchester and Lu teach a system and method that covers substantially all limitations of the parent claim. Manchester further teaches utilizing acknowledgement messages to acknowledge link commands.

Manchester does not explicitly teach support to add, continue, or drop a node in a BLSR/UPSR topology as in claims 29-30 and 63-64 of the application.

In Figures 4a-4e and 6, Lu teaches a method of support to add, continue or drop a node in a BLSR/UPSR topology that includes using a ring table in the network elements and utilizing standard communication protocols and messages to inherently determine messages received by the network elements and generate/transmit network element link commands between network elements to update the ring tables in the network elements. (column 6 lines 3-6) The ring tables are used to create and modify working and back-up channels/paths and can delete resources the plurality of network elements allocated to the working or back-up channels/paths including deleting the node within the working or back-up channels/paths. (column 8 lines 6-15, 41-65)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of utilizing acknowledgement messages to acknowledge link commands of Manchester to include support add node, continue node, or drop node in a BLSR/ UPSR topology as taught by Lu so that network elements in the SONET environment can be reconfigured into SONET rings and the network elements can acknowledge deletion of resources allocated to the communication channels/paths.

- In reference to claim 31 and 65

The combination of Manchester and Lu teach a system and method that covers substantially all limitations of the parent claim. Manchester further teaches a method of determining whether the network element is a termination node and utilizing acknowledgement messages to acknowledge link commands.

Manchester does not explicitly teach receiving a modify link command as in claims 31 and 65 of the application.

In Figures 4a-4e and 6, Lu teaches a method of modifying working or back-up channels/paths in a BLSR/UPSR topology that includes using a ring table in the network elements and utilizing standard communication protocols and messages to inherently determine messages received by the network elements and generate/transmit network element link commands between network elements to update the ring tables in the network elements. (column 6 lines 3-6) The ring tables are used to create and modify working and back-up channels/paths from a first network to a second network element including modifying the sequence of nodes to create an optimal working and back-up channels/paths. (column 8 lines 6-15, 41-65)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of determining whether the network element is a termination node of Manchester to include using ring tables at the network elements to create and modify working and back-up channels/paths from a first network to a second network element including modifying the sequence of nodes to create a

optimal working and back-up channels/paths because it allows the reconfiguration of the SONET rings.

- In reference to claim 35

In Figure 8, Manchester teaches a system and method in a ring or linear topology that includes: (column 4 lines 14-57)

- A network element receiving a command (receiving a link command) (step 802)
- Determining whether the command is a trigger, acknowledgement, coordination message and whether it is associated with a protection bundle (determining type of link command) (step 806)
- When the network element receives a trigger (establish command), indicating that another network element has detected a failure and that the PB needs to be switched from the working facility to the protection facility the network element determines whether it terminates a BPF (determine if it is a termination node) (Figure 5D)
- If the network element does not terminate the BPF specified by the trigger, the network element forwards the trigger to the end points via the through BPFs (optimal path). (step 818)

Manchester does not explicitly teach:

- Processing the link command based on the type of path to the adjacent one of the plurality of network elements

- Determining the link coupling protocol
- The network element containing a processing module and memory.

In Figure 11, Lu teaches a network element containing a CPU and memory in a UPSR/BLSR topography. The network elements utilize a ring table to store the ring type or topology (link coupling protocol) of the plurality of network elements. (column 7 lines 53-54)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Manchester to include the network elements, containing a CPU and memory and the network elements processing the commands based upon the ring type of the adjacent network element stored in the ring table of the network element because it allows the network elements to be configured in linear, UPSR, and BLSR topologies within a SONET environment and allows a termination node to switch from the working facility to the protection facility used by the specific ring type.

The combination of Manchester and Lu does not teach receiving a network manager link command.

Naik et al. teaches a network element management system which automatically configures itself when an operator enters a component identifier for optimal full-featured management of the identified component. The network element inherently receives the command and determines the type of command. (abstract)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of the combination of Manchester and

Lu to include a network element receiving a command from a management system because it allows a network manager to configure or reconfigure the ring tables in the network elements as well as the SONET rings.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Eslambolchi (US 5859836) teaches an alternate ring restoration technique.
- Merli et al. (US 6088141) teaches a self-healing network.
- Hansen et al. (US 6094417) teaches a method and system for determining optimized sonnet rings.
- Daruwalla et al. (US 6269452) teaches a system and method of fault recovery for a two-line bi-directional ring network.
- Uematsu et al. (US 2001/0019540) teaches a ring configuring method and node used in the ring.
- Chan et al. (US 6301254) teaches a virtual path ring protection method and apparatus.
- Chaudhuri (US 6324162) teaches path-based restoration mesh networks.
- Langridge et al. (US 6683849) teaches an optical communication network with working and protection channels.
- Siu et al. (US 6744769) teaches path provisioning on ring-based networks.

- Gullicksen et al. (US 2004/0190461) teaches a virtual line switched ring connection state distribution scheme.
- Wang et al. (US 6901048) teaches link-level protection of traffic in a packet-switched network.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Roberts whose telephone number is (571) 272-3095. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 2

Complete if Known	
Application Number	
Filing Date	9/27/01
First Named Inventor	Wank, et al
Group Art Unit	
Examiner Name	
Attorney Docket Number	WRN0002

jc997 U.S. PTO 09/965363 09/27/01

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No.1	U.S. Patent Document Number	U.S. Patent Document Kind Code 2 (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

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Sheet 2 of 2

Complete if Known	
Application Number	
Filing Date	
First Named Inventor	Wank, et al
Group Art Unit	
Examiner Name	
Attorney Docket Number	WRN0002

Examiner Initials*	Cite No.1	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T2
BSR	1	"MPLS and Label Switching Networks", by UYLESS BLACK, Prentice Hall Series in Advanced Communications Technologies, published by Prentice Hall PTR, Prentice-Hall, Inc., Upper Saddle River, New Jersey 07458, Copyright 2001	☐
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Notice of References Cited	Application/Control No. 09/965,363	Applicant(s)/Patent Under Reexamination WANK ET AL.	
	Examiner Brian Roberts	Art Unit 2662	Page 1 of 1

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	A	US-5,412,652	05-1995	Lu, Tsu-Kai	370/223
	B	US-5,793,745	08-1998	Manchester, James S.	370/224
	C	US-6,901,048	05-2005	Wang et al.	370/228
	D	US-2004/0190461	09-2004	Gullicksen et al.	370/258
	E	US-6,744,769	06-2004	Siu et al.	370/395.32
	F	US-6,683,849	01-2004	Langridge et al.	370/223
	G	US-6,324,162	11-2001	Chaudhuri, Sid	370/225
	H	US-6,301,254	10-2001	Chan et al.	370/397
	I	US-2001/0019540	09-2001	Uematsu et al.	370/258
	J	US-6,269,452	07-2001	Daruwalla et al.	714/4
	K	US-6,094,417	07-2000	Hansen et al.	370/222
	L	US-6,088,141	07-2000	Merli et al.	398/5
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